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RESISTANCE OF SALMONIDS AGAINST *AEROMONAS SALMONICIDA*: HOST GENETICS AS A MAIN PLAYER

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Furunculosis, caused by *Aeromonas salmonicida*, continues to be a health problem for the growing salmonid aquaculture. Despite effective vaccination programs regular outbreaks occur at Danish trout farms calling for repeated antibiotic treatment. We hypothesized that a difference in natural susceptibility to this disease might exist between Baltic salmon and the widely used rainbow trout. Hence, a cohabitation challenge model was applied to investigate the relative susceptibility to infection with *Aeromonas salmonicida* in rainbow trout and Baltic salmon. The course of infection was monitored daily over a 30-day period post challenge and the results were summarized in mortality curves.

A. salmonicida was recovered from mortalities during the entire test period. At day 30 the survival was 6.2 % and 34.0 % for rainbow trout and Baltic salmon, respectively. Significant differences in susceptibility to *A. salmonicida* were demonstrated between the two salmonids and hazard ratio estimation between rainbow trout and Baltic salmon showed a 3.36 higher risk of dying from the infection in the former.

The finding that Baltic salmon carries a high level of natural resistance to furunculosis might raise new possibilities for salmonid aquaculture in terms of minimizing disease outbreaks and the use of antibiotics.

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